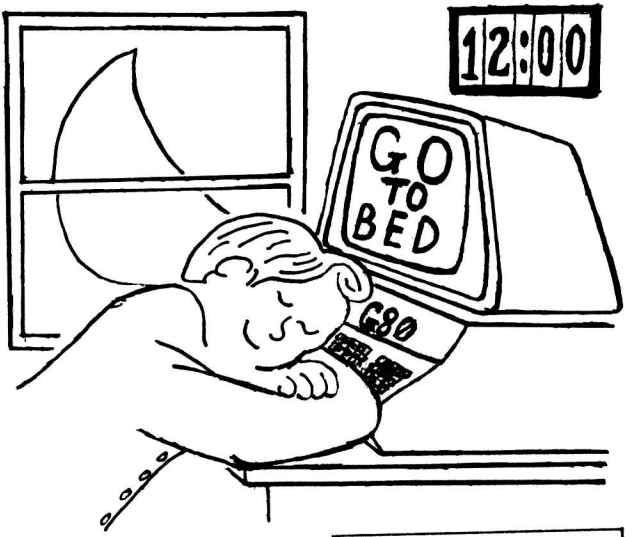
MIDNITE SOFTWARE GAZETTE



Issue # 5
Fall 1981

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Published by
CENTRAL ILLINOIS
PET USERS GROUP

c/o Jim Oldfield
635 Maple
Mt. Zion IL 62549
217/864-5320

ATUG Disk Exchange:
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200 S. Century
Rantoul IL 61866
217/893-4577

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HELLO!

A new year begins for Midnite, almost, but not quite on schedule. Of course we have an excuse--doesn't everybody? I hope you all like the third edition of the Osborne PET Guide, but right now, I hope even more that we can tie up stray ends soon! Consider this issue our study break from the book, which is still scheduled for publication by the end of 1981. Corrected errors have surged past 1,000. We've also added 3 chapters, divided the book into PET & CBM volumes, & added the most detailed memory map you may ever see for PET, covering at least 6 variations of BASIC.

Though we've spent some time at each other's throats, Ellen & I are a good pair for this work: I work on accuracy & she works on clarity. According to Kilobaud Magazine, Printout recently reviewed the second edition of our book in these terms: "Initial elation that [Adam Osborne's] PET/CBM Personal Computer Guide was being considered for the National Book Award wore off rapidly once it was learned that it had been nominated for the fiction category. A spokesman described the chapter on relative data files as a masterpiece of imagination." (Readers may wish to pray for me as I try to repair that chapter!)

This issue is a bit shorter than M#4, in hopes we can keep it under 1 oz., & mail it before the Nov. 1 postal rate increase. There is much more to be said, but it will have to wait for M#6. Those helping this time included JO=Jim Oldfield, JOH=John O'hare, MN=Mark Niggeman (who is moving to the area fairly soon), ES=Ellen Strasma (our editor),& JS=Jim Strasma (yours truly). BA=Brent Anderson, may or may not make the deadline with the ATUG NOTES. Len Lindsay is super busy this month, & has not submitted COMAL NOTES yet. Write him to hear the latest on COMAL. He is really developing it into a NICE package. I get a new improved version of a COMAL manual or help disk from him almost weekly!

Since most votes favored accepting ads, we're running 3 this time. Please thank our sponsors by: 1) copying the ads along with the rest of Midnite & 2) buying from them. I notice that each of the 3 companies has been favorably reviewed by us previously; we can recommend them with a clear conscience. Thanks also for the donations. JO & I each gave $25 to print #4, but this one should break even.

There's no official CBM news this time. The Commodore Hot Line people really do try to help. Their number is 800/523-5622. If they can't help, we can try, within the limits of time & our non-disclosure agreement.-JS

In case BA misses the deadline, contact him at ATUG about the hardware review he's doing. BA, J&ES, & many others working independently around the world have invented a new model PET! It is a transformed Fat Forty, with an 80 column screen, & the graphic keyboard. You cannot get it from Commodore, & you probably void your warranty to build it, but it certainly is becoming popular! Even some of Commodore's own employees are creating them. We will support it in the Midnite, & will be calling it the "Graphic 80", or "G80" for short.

NEW PRODUCTS & RUMORS

IEEE PERIPHERALS. In M#3, we told you to avoid buying IEEE peripherals, since nothing but PET can use them. Well, that's changing with 2 new announced products, the Osborne I computer & the Kontron Computer/Instrument Controller. One person wrote a national magazine that since no one uses the IEEE protocol, the Osborne should have used a simple parallel port instead of the IEEE port. Time, if not several hundred thousand PET owners should prove him wrong. Commodore was far-sighted in choosing the very simple, but powerful IEEE-488 bus. Even Apple owners can now buy an IEEE interface. You can use the IEEE as a simple parallel port, but with lowering prices, why settle for anything less than the power of IEEE-488?

We disliked the Osborne's tiny screen & its inadequate number of columns per line. You may want to look into the Kontron Computer/Instrument Controller, a computer designed as an IEEE-488 controller, with 64K RAM, two 150K disk drives on board, a detachable keyboard, 512X256 dot graphics, arithmetic board optional, two RS232 ports, a Centronics parallel port, and CMOS buffered RAM with battery backup. Other than that, it's much like a CBM 8032. Significantly, the announcement neglects to mention price!-JS

CP/M RUMORS

Lifeboat Associates is considering charging $1000 retail for a unit to allow 8032's to use CPM software. At that price tag, the line to place orders shouldn't be very long. This unit expected to be externally to rear of CBM, & will include on board Z80, CPM 2.2., & 64K addressable RAM. Estimated release date 12/1/81. Good news! Lifeboat will likely provide a service to reformat existing CPM software disks to 8050 format.

Another CPM option In addition to Lifeboat, there are still rumors that Madison Computers will be producing a CPM board in association with another firm. The project is not firm yet, but unit will likely be internally mounted, & use the 8032's RAM. Expected to be less expensive (±$700) than Lifeboat version. Release predicted early '82.

When either of these products are finally released, Commodore will finally join the ranks of nearly every other micro-computer manufacturer by offering CPM to provide access to the huge library of CPM business software. While neither of the above alternatives are cheap, many small business users may still want to broaden their options with this addition.-Joe Spatafora

EXPANDED VISICALC?

Apparently, Commodore Norristown is attempting to develop a Visicalc version to take advantage of the 8096, (64K Memory Expansion Board for the 8032), but is forced to use the current 1.70 version, rather than the more sophisticated Visicalc packages (Apple 3.3, HP83, TRS80, etc.). They are hoping to release it ± 1/82.-Joe Spatafora

PET PROGRAMMING HINTS

1) POKE 14,1 before an INPUT statement will cause suppression of the '?' prompt.-JOH

2) Use >$0:*=S and the disk will return a directory of SEQ files or use P for PRG files, U for USR files, or R for REL files. Do a >U: & then a >I to software reset the disk. These items were found in PRINTOUT. -Arthur Cochrane

DISK HANDLING HINTS FROM A BRITISH USER:

1) It's not feasible on the CBM system to use disks with any damaged blocks. Give them to APPLE users!

2) OVERWRITE in WordPro II & REPLACE in WordPro III actually do SAVE with REPLACE.
3) If you INITIALIZE every time you insert a disk, a duplicate ID will never bother the system; it will merely confuse you.
4) In a CBM floppy, the usual head-load solenoid has been omitted; this means the head is permanently loaded against the diskette. Consequently, if power is turned off for as little as a second while a disk is in the drive, a record can be destroyed.-Geoff Capell

AND ON THE IEEE 488 BUS:
PET's internal firmware can talk with 12 distinct (4-15) external IEEE addresses. This does not necessarily mean 12 items can be connected to the IEEE bus simultaneously; that depends on the driving ability of the TALK circuits. More than 1 BASIC 4.0 PET can be connected to the same IEEE bus, with no special precautions, provided only 1 PET uses the bus at a time.-Geoff Capell

MILLIKEN SCIENCE SERIES:
"I can offer a "fix" for Milliken Math Sequences on cassette for the PET to run of 4.0 BASIC...with anyone that has the Milliken set & cannot get them to go on the 4.0 series. Milliken refuses to answer my letters asking for help & refuses to answer my offer of a "fix."-Bob Bergevin

WANT ADS (formerly SOFTWARE NEEDS)

WANTED: Comprehensive FINANCIAL MODELLING PACKAGE (ala DSS micromodel, Microplan, FPL, SuperCalc, etc.) that will RUN ON THE 8032/8050? Help! CBM Visicalc is a nice initial package, but lacks powerful features in the others. With the surge of sales of the CBM 8032/8050/8250 units being sold to small businessmen, software houses are missing the boat by not supporting Commodore. Let your voices be heard out there!-Joe Spatafora, 1870 Sailfish Rd., St. Petersburg FL 33707

WANTED: Software to allow direct INTERACTION BETWEEN the new OSBORNE 1 & PET via the IEEE 488 bus. Any ideas or existing applications in this area.-Joe Spatafora

WANTED: Quality software for ON-FARM USE, primarily for 8032/8050 or 8032/4040 systems.-Bill Womelsdorff of Eagle Microsystems, P.O. Box 2339, Auburn AL 36830
[Editor: Check with Cyberia, Inc., of Ames IA. Any farmer want to act as contact for others in the U.S.?-ES]

WANTED: Good GENEALOGY program, reasonably priced, for large data base. Basic 2 or 4 & DOS 2.-Jerry Key, 141 Flint Ridge Dr., Gahanna OH 43230 (614/475-6060)

WANTED: SCHOOL BUS MAINTENANCE & RECORDS program for a 40-bus fleet.-Bob Bergevin, Au Sable Valley Central School District, Clintonville NY 12924

WANTED: UNITED STATES SWIMMING (USS, formerly AAU) SWIM MEET program to seed, record time & finish order, & print results for dual or larger meet. Could be adapted for high school meets.-Bob Bergevin

WANTED: DAILY ATTENDANCE program to meet NY State Education Dept. requirements in keeping school attendance.-Bob Bergevin
[Editor: If you don't find what you want, you might start with a school attendance program by JS & sold by Dr. Daley Software, or found on early disk versions of JS' SUPERSORT (now renamed SUBSORT)]

WANTED: DISTRIBUTOR for NICK HAMPSHIRE publications in the U.S.-Bob Bergevin

WANTED: HI-RESOLUTION PLOT program on a DIABLO-based printer--ideally, a graphics screen dump. The power is inside my Starwriter, but no program to use it. 3 years ago, its graphics were considered one of Diablo's best features, with resolution equal to that of many plotters.-JS

WANTED: KEYSWITCHES, to add functions to my GRAPHIC-80 PET. With 7 open spots in the keyboard matrix, I need a row of unencoded keyswitches, which could either mount through the case, or on a piece of bent metal at its side (like add-on car oil gauges). It should be possible, with a simple ROM change, to generate ERASE-TO-END, BEEP,INSERT LINE, etc; with a bit more ROM tinkering, we could expect a true CONTROL KEY function. Since the Graphic 80 already requires a home-brew ROM, why not make it better than standard?-JS

WANTED: LIGHT PEN for 12" PETs. Their 6545 video chip has light pen registers. Has anyone has done it yet? It should work the same as on the VIC.-JS

WANTED: A VIDEO INTERFACE to hook another monitor to my PET.-JO

WANTED: Where I can buy a program named TAIPAN? It's no longer available.-JO

WANTED: Programs to ELIMINATE the need for THE SHIFT KEY & pressing 2 keys simultaneously.-Geoff Capell, Wyckham Ward, Royal Hampshire County Hospital, Winchester, Hants U.K. 61298

READERS COMMENTS AND QUESTIONS

Well, JS expected to strike a sore nerve with someone sooner or later...and we did...with the discussion in M#4 of Dr. Daley's MAIL LIST. Here are friend Jerry Key's comments to us:

RE: CONTROVERSY AT MIDNITE(?): Should reviews be colored by telephone comments solicited by the Editor? I think not. MIDNITE should not involve itself in obtaining rebuttals. Reviews are in the eyes of the beholder. I am an avid supporter (maybe short on $?) of the MIDNITE & would like to see it unchanged. There is nothing more useful to all of us than a well thought out review as D.D.'s of Daley's MAIL LIST . Frankly, I thought it was mild! He was more than fair considering the countless hours invested in thoroughly digesting the manual (much more than the 1 day indicated) & the only changes made were to keep his business running until Dr. Daley provided a permanent fix.-Jerry Key

RE: NAME A ROM CONTEST (M#4): My vote must go to conventions established (don't tell Commodore US) by Commodore Canada in TRANSACTOR, v.3, issue#1, adopted by Loren Wright in Micro, April 1981 & well said by the PET Guru, Jim Butterfield. These are as follows:

CBM Canada & Wright	Butterfield
Basic 1.0	Original ROMs
Basic 2.0	Upgrade ROMs
Basic 3.0 (never released)	
Basic 4.0	Basic 4.0 -Jerry Key

[Reply: Since Key was the only entrant in our contest, he earns the prize. But there's one little problem--he suggested it in the first place!-JS]

RE: DISK SAFETY (M#4): PETs also dislike electronic flashguns.-Geoff Capell

RE: CHEAP MAILING TO EUROPE: Investigate sending disks as air freight instead of airmail. It should be a lot cheaper & only takes 1 day extra. Service is USA to

UK only at the moment.-Geoff Capell

RE: UNCRASHER: I ordered a hardware product known as the "uncrasher" on May 12th, & since then I've re-ordered this product twice by phone. 3 weeks ago I called again & I was told it was mailed to me 3 days before. I'm still waiting.... I've inquired a few times with MasterCard, & each time was told they didn't bill me. I gave up on that company. Can you recommend a company that sells an uncrashing device? -Roy Merme, Box 3291, Bay Station, Brooklyn NY 11235

[Reply: Kilobaud, September, 1980 carried an article by me on building one. The Kingston Repeat Key now being advertised in the U.S. is said to have one in its deluxe version. I consider Roy Busdiecker trustworthy & think he is associated with International Technical Systems, the seller of the "Uncrasher". Roy had an article in the last issue of The PET Paper, but I was unable to locate him for you. The "uncrasher" is a very necessary device for users who need a warm-reset capability, but cannot build their own. ITS, are you still there? If not, anyone else want to build "uncrashers"?-JS]

FAIR FEE VS. PIRACY RISES AGAIN

CONFESSIONS OF A PROGRAM COPIER:

I have gladly copied many commercial programs, to avoid the hassle of testing a program in a store or buying & returning one by mail, hoping my money would be refunded. After being run a few times, 85% of the programs are either boring or show their real failings. For good programs still not worth buying, I usually send the distributor a letter of comments & a check for what the program is worth to me. For really good programs I use regularly, the documentation & support is usually so good that it is best to buy the programs anyway. No one has a moral right to copy, use & not pay the distributor their full worth. I also do not believe in paying $300 for a program I might use twice a year. This is where a Users Group is nice. You should be able to borrow another member's program to do your infrequent processing. Remember that if you send a letter to a distributor admitting you copied their program, you are sending them evidence against you. Tell them you have played/used their program & wish to contribute, due to your satisfaction. You might mention that you infrequently use it. Programmers are due the worth of their efforts based on your use. Be fair.

Some programs worth buying: MAE, WORD PRO, VISIBLE MUSIC MONITOR, any of the EPYX games (HELLFIRE WARRIOR, DATESTONES, MORLOC'S TOWER, TEMPLE OF APSHAI, RESCUE AT RIGEL), SPACE INVADERS, VISICALC, MICRO CHESS, CURSOR subscription programs.-Roy Wagner

RE: PIRACY (M#3):

I think it ridiculous that I should pay as much for a copy of WordPro III as an office using it continuously. I use it & Visicalc 2-3 times a year, but I pay list price for programs I use several times a week. Although I think an annual fixed royalty would be fair, I have to use the existing system, so I pay for software I use frequently, but provide free copies to people I can trust not to try to exploit it commercially.-Geoff Capell

[Reply: Thanks for sharing your rationales... With so much EXCELLENT software now available in the PUBLIC DOMAIN, I see little need to give away worthwhile commercial programs, unless it's a matter of legitimate owners sharing improvements they have added to programs with other legitimate owners, as was the case with one program Geoff sent me. Will we ever solve the fair-fee problem?-JS]

GUEST REVIEWERS:

Please note this word to the wise. Don't send us reviews on products you

obtained illegally. We print your names with the reviews, & the software houses do notice when a non-customer describes their work in print. You may review things you tested adequately in a store, or at a friend's, but please be prepared to explain where you saw the program if you didn't buy your own copy.-JS

DEALERS

DISKS, ETC. Best buy I've found for printer paper & labels. Orders by mail or phone. Very helpful, good service. Club discounts covers shipping.-Jerry Key

HUMAN ENGINEERED SOFTWARE, Revisited. Received HESLISTER without needed changes to recognize Basic 4's commands. Brief letter resulted in a new copy that works very well on all BASICs, letter of apology & some very nice additional routines for the inconvenience! Human Engineered Software is not a name, but a fact in their business!

Programs received included Basic Aid, versions of Wedge, Tiny Music, Compactor & others... I have to hand it to them for their attitude, even if I already have what they sent. It's amazing that people with lower cost programs try so hard to please, when it would be so much easier not to.-Jerry Key

INSTANT SOFTWARE. Last year, I ordered a PET Demo cassette...had loading problems...returned it & they replaced it. IS claims PET has highest rejection rate of cassettes...I returned it again stating it will not load...& I have NEVER had a load error on a Cursor tape on any of (my 8) cassette decks...-Bob Bergevin

Bob recommends Tony Violante of UPSTATE COMPUTER SHOP of New Hartford NY, near Utica as a helpful dealer, instead.-ES

USER GROUPS

We KNOW there are many more PET User Groups around, but only the following groups officially notified us IN WRITING of their existence, meeting times & contact persons since we've moved. For instance, Dick Juvet mentioned a new group in the Phoenix AZ area, & Jack Moss mentioned the Denver group, but neither listed meeting times & location, group name &/or contact. Keep us informed so that we can make accurate referrals!-ES

LIBRARIANS: Please try to keep your libraries somewhat weeded. For example, though SPACE INVADERS versions abound, one recent version works on both upgrade 2.0 & 4.0 ROMs, which should replace at least 2 others in our library. Otherwise, we must constantly erase the same old versions as they come in from groups around the world. That is manageable if everyone leaves program names alone. If you improve a program, just add a sequence number or date to the end of the existing title. It will also help if every changed line is marked with a 'rem<<<' or other similar marker that a TOOLKIT can FIND. I now have 4 or more "improved" versions of UNASSEMBLER from users all over, but no easy way to merge them into a best combination, except to run CURSOR's COMPARE program. Try not to renumber others' programs; after that, even COMPARE cannot show the changes!-JS

COPUG (Central Ohio PET Users Group): Contact Denny Ketter, 3270 Penfield Rd., Columbus OH 43227. Specialize in CBM Assembler applications. Other interests: data bases & hardware mods/add-ons. Have details of home grown version of 2040/4040 error/on light w/o sound for you-do-its. Send self-addressed stamped envelope (SASE) for details, or letter if interested in exchanging programs/info. Group meets 3rd Thursday each month at State Savings Bank, Hamilton & Havens Corners Rds, Gahanna, Ohio.

CHAO (Rochester NY). Phillip Chao is not, strictly speaking, a group. However,

he provides a user group service. As mentioned in M#3, he is accumulating an exchange library for PUG groups to access. He is up to 40 disks now, cataloged by subject & alphabetically. PUG groups are welcome to contact him about obtaining copies of library programs, & adding their own exchange libraries to the collection.

SCPUG (Southern California PET Users Group), with approximately 100 members. Meets 1st Tuesday of each month at DES, 8315 Firestone Blvd., Downey CA 90241 (213-923-9361). Information provided by Roy Wagner.

SPHINX, one of the first, largest, & most expert of the early PET user groups is still alive & well at Box 151 in Berkeley CA 94701. Group meets second Tuesday each month at Lawrence Hall of Science at 7PM. Large exchange library on disk & cassette, including some offerings for the VIC. Bill MacCracken apparently handles tape exchanges, Bax Babin handles VIC exchanges, & Glen Fisher, (of CURSOR magazine?) handles disk exchanges. For meeting info, call 415/486-5101.

SILICON VALLEY PUG, is an apparently related group, meeting on the first Wednesday of each month, at Ford Aero Space. Contact Marvin Van Der Kooi at 408/446-1936. In August of 1980, they had a dozen exchange disks available.

Here are two more groups in California:

Lawrence Livermore National Laboratory's LLNL PET CLUB. Meets inside the gates at noon on the first Wednesday of each month. Security clearance required to attend. Contact is Ron Gunn at 415/447-4260.

PALS, (PETs Around Livermore Society), is for less technical users than LLNL's. It meets the third Wednesday of the month at Fifth Street School, 2253 Fifth St. Livermore CA. Emphasis on utilities & education. Contact Jo Johnson 415/449-1084.

Anyone know of or want to form a VISICALC Users Group? Contact Bill Womelsdorff, P.O. Box 2339, Auburn AL 36830 (205-826-3691 or 5205-821-3678)

BOOK REVIEWS

PET GAMES & RECREATIONS, by L. Lindsay, M. Oglesby, & D. Kunkin. $13 from Reston Pub. Co. Primarily for graphic keyboard PET models. Includes over 20 well-structured games for PET. 5 types of games covered: Plan ahead, Deductive reasoning, Chance, Language & counting skills, & Recreations. Good book; most games are worth keying in & will provide enjoyment for all ages.-JOH
...Listings are typeset, using COMPUTE! magazine conventions for cursor control characters, making programs easier to enter than CBM printer listings. Cassette of 10 longer programs available (price unknown). My only complaint: none have sound! Highly recommended if you love to play games. -MN
[Even non-gamers like myself will find this a good book for its excellent BASIC structure & program explanations. Also be sure to catch the humorous lectures at the end. They hide some useful programming hints that have been carefully made compatible with PETs of every vintage.-JS]

PET BASIC: TRAINING YOUR PET COMPUTER, by R. Zamora, B. Albrecht & W. Scarvie. $13 from Reston Pub. Co. First book to fully explain to the TRUE novice how to write & execute PET BASIC programs. Commodore approved. Highly illustrated, & very readable, even if you've never used a computer. Another volume in the series may be coming. Recommended if you are just starting on the PET.-MN
...This is an excellent manual. However, it has 3 major faults: 1) The small calculator keyboard is used throughout, which has been unavailable for over a

year; 2) Only at the book's end do you learn VERY briefly how to save a program or load it from cassette, without a word on reading or writing cassette data (too bad Albrecht didn't include his excellent piece from Interface Age 2 years ago on how to turn on the PET & load a program); & 3) Nowhere are disks or printers mentioned, though over half the PET owners I know have one or both. I suspect the bulk of the book was written before the large keyboard PET, disk or printer existed, but it still could have been revised before its 1981 publication.-JS

MOSTLY BASIC: APPLICATIONS FOR YOUR PET, by Howard Berenbon. $11 from Sams. 24 generalized applications programs usable with virtually any microcomputer using BASIC. Editions exist for TRS-80, Apple & PET, which are all BASICally the same. Even ATARI, with its primitive BASIC, can run programs from the PET edition with few changes. Programs ARE useful, though nothing special. IRONY: the clock programs don't use the PET clock! Since 1 program's instructions recommend hitting CONTROL-C to quit, I presume the Apple edition came first (fortunately, PET does have a CONTROL-C key: [stop]!). On balance, this is more a manual on generalized program writing & good documentation than on PET programming or good applications.-JS

INSTRUCTION SET SUMMARIES, from Arthur Cochrane:

6502 MICRO CHART from Micro Logic Corp., is the BEST. A hard plastic notebook sheet with the most information in 1 place you will ever find on the 6502.

6502 INSTRUCTION HANDBOOK, $2 from Scelbi Publns. A shirt pocket book on the 6502. Good for quick explanation. One error noted: for STORE instructions (STA, STX, STY), it states the flags are affected (untrue) the same as for loads.

SYNERTEK & MOS TECHNOLOGY, Inc., have 6502 instruction set summaries. Synertek also has a 6522 summary which is great for working with the User port. Write them and request one.

Pocket Reference Guide, free when you buy a product from LEADING EDGE COMPUTER PRODUCTS. Very handy PET reference (BASIC 4.0 not included on the ones I have). Make sure they are still in business, though, as the ones I have were bought over a year ago.

MAGAZINE REVIEWS

Cursor Magazine, Revisited, $18/4 issues. This cassette magazine still remains 1 of the best software buys for PET. Latest issue includes arcade game, 16K adventure & 4 others. Recommended.-JOH

Dtack Grounded, The Journal of Simple 68000 Systems, $15/6 bimonthly issues. Bright new star on PUG horizon. EXCELLENT newsletter on how to use the 68000 superchip. Editor has CBM 8032, so newsletter is correct for PET users. Even if you aren't ready to spend $600 for a new processor board, assembly-language programmers & hardware hobbyists will get far more than $15 benefit from this newsletter. If you DO have $600, some PET programs can already use the 68000 speed, with more PET commands being transferred to the 68000 over time. If, as I suspect, the 68000 will be the true replacement for the 6502, especially for large scale applications, reading about it now will prepare you for the future.-JS

Epson Information Exchange, $12/12 monthly issues. Premier issue of newsletter included tips on using TRS-80 graphics on an Apple, info on GRAPHTRAX enhancement ROM, & using super-popular Epsom MX-80 with TRS-80 & Apple text-editing programs (I'm biased; nothing in Microdom except for WORDPRO & WORDSTAR deserves the name

Word Processor.) So far, no PET uses listed in forthcoming column. Still, since we prefer the MX-80 to the CBM 4022, you may as well hear what others are able to do with it if you buy one.-JS

Genealogical Computing, $12/ 6 bimonthly issues, from Data Transfer Associates. Complimentary issue upon request by mail or call 703/978-7561 & leave message on Family Historians' Forum (a bulletin board). First issue very informative. Many articles dealing with use of personal computers in genealogy, short sample programs, reviews on known genealogy programs & genealogy tips. Has surname search & queries for reasonable fee. First issue TRS-80 oriented, but promises to cover other systems as info becomes available. Highly recommended for those interestd in genealogy.-Jerry Key

Microxchange, $15 for 10 issues/half year, from editor Maisie Irish Cohen (805/963-4187). I haven't quite figured Microexchange out yet, though I have their newsletter. Maisie Irish Cohen is editor, & interested in PET, but the group itself, if it is a group, is heavily APPLE oriented. In a couple of pages, the newsletter covers most anything, & is a cross between a catalog, a reference, a newsletter & a magazine. One nifty idea: renting PETs, etc., for $75/mo.-JS

Printout, Revisited, June 1981 Issue. Nice glossy appearance, but the few articles are in varying size prints. Some hard to read. 64 pages, 24 pages of articles/columns (generous count) & rest high priced advertising. Better to support Midnite, Transactor, The Paper, & Compute.-Jerry Key

Commodore PET User's Club Newsletter(U.K.). "I subscribe to the official PET UK newsletter in the belief it will always be correct about CBM products. Recently, 2 series of articles started, & I know their contents to be rubbish. Hence, [I wrote] the CPUCN letter, which wasn't acknowledged by the editor, or either author; my subscription will not be renewed."-Geoff Capell

BUSINESS REVIEWS

ASERT, $450 from CFI. Requires 80 column screen & 8050 disk. Query-type database manager. Holds 1900 large records, accessible from outside ASERT. Protected with a functional ROM. Includes my SUBSORT, & Higginbottom's INPUT EDITOR. (Sorry, I'm the only one in CIPUG temporarily with an 8050, so I must do the review.) Has 3 main sections in each record: 1) a typical mail list section with variable number of fields, any of which may be sorted or subsorted, up to 5 levels deep; 2) a REMark section that is totally free-form & neither sorted nor searched; 3) a yes/no section for membership in up to 90 categories, for later searches. Searches may be very complex, with "must-haves", "must-not haves", & "get-brownie-points-for-having" categories, which may be mixed in most ways. Printouts are simple & inflexible, but easy & useful. Originally developed to keep track of campers' records & talents. Typical application: to store resumes. ASERT could easily find names (if such exist) of 5 engineers with doctorates who speak Spanish, have worked with integrated circuits, & are willing to travel. User manual & demo disk are very well done. Only lack: details on the file layout needed to access records from outside the program. Recommended -JS

DR. DALEY'S MAIL LIST, Revisited (see M#4). Have been deeply involved with D.D. since 1st received MAIL LIST. Infant problems were fixed in reasonable time, but more problems persisted. Exceptionally tightly coded (good) programming technique that defies user repair or modification. Problems included: lost records when crossing data diskettes on 2 or 3-up labels (may be fixed), re-sort problems, lost directories & format files (persistent), & collapsed non-recoverable records. Only mod. made was to keep program (& business) running until fix made. Currently, only mod in program is routine to allow a specific

Wordpro file to be generated from multiple data diskettes. Otherwise, the untouched version used. One early version came sans print routines, last version received was missing 1 program. May function well as a straight mail list but reliability questionable when used to full potential (& it is a powerful & unique program). Would like to hear directly from other users of program.-Jerry Key

EDUCATION REVIEWS

EDUCATOR II ALGEBRA QUIZ, $10 from Cascade Computerware. Very well written, good documentation & easy to use. NOT a tutorial, but a concept drill of material already learned by students. Second version is PRINT ALGEBRA, which gives a hard copy of the quiz with or w/o answers adjacent to the problems. Offers many print format options. Excellent source of computer-written tests for teachers. This education program does what it was designed to do & doesn't promise to make the user eligible for a Rhodes Scholarship! Worth the price.-D.C. Johnson

[Midnite requests reviews of the Merlan Micro Series (Physics programs for PET), or other commercial education programs. What programs are you educators presently using?-ES]

"FIRMWARE" REVIEWS

CALC Revisited (see M#4). I have been working with CALC about 3 months, which has proved to be quite powerful. Statistical programming has been much enhanced. Provides most advantages of assembly language, like allocating & freeing up space wherever I want it, w/o drudgery. I had very little trouble learning to use CALC, after a thorough study of the manual. I prefer BASIC for I/O to the I/O macros included in CALC. Trace Window is invaluable, especially for large programs. CALC code is portable between PET & Apple machines, & between different PET ROMs.-Doug Pierce

POWER, $90 from Professional Software. Versions for Upgrade 2.0 & 4.0 BASIC, except for the Fat Forty (The 8032 version works on Graphic 80's). Programmer's Aid. This is one program I've wanted for a year. Both Jim Butterfield & Commodore Canada use it, which is the highest recommendation I can give. First slated to be sold by Skyles instead of the much less reliable Command-0. Some respected Canadian users have speculated that Skyles held Power off the market until Command-0 could be finished, & that it took features from Power. I can personally affirm only that Power was completed long ago, & that Command-0's reportedly best features are also in Power.

Apart from the controversy, & its famous users, what is Power's power? 1) An EXCELLENT manual by Jim Butterfield, to suit any user (beginner or expert) with an excellent reference section by author Brad Templeton. 2) Detailed instructions on how to call its features from other programs, change the way it works, & even add more commands to it. 3) The dealer pack includes a demo disk with instructions, & stick-on labels for the instant keywords (Hit shift plus a key & see a keyword appear on the screen). Since most keywords can already be abbreviated without Power, I don't use the labels. However, instant phrases & subroutines are also available, & that IS powerful. 4) Execution files: you execute the contents of a sequential file as though they had been typed in at the keyboard. This is supposedly good for merging programs, but I use BASIC AID 4.0's MERGE command. A better use would be to get into programs with complex set-ups, like Wordpro or JINSAM. 5) Power's BEST feature is a very sophisticated CHANGE command. Most aids can find things, but only BASIC AID 4.0 & Power can do anything with the information. It finally approaches MAE's powerful editing features. 6) SCROLL, as in other programs. 7) Advanced RENUMBER, as claimed for Command-0, but works reliably in Power. 8) TRACE has bells & whistles to let you choose where the display appears, what is shown, & how rapidly. 9) A future use

of Power for machine-language programmers may be its interface with Templeton's matching 4K assembler. Last May, Jim Butterfield demonstrated PAL4 for me. At present, you cannot buy, beg, borrow or steal it, but some say it will be available very soon, at a good price. (Brad Templeton, if you're out there, please release it.) Power & Pal work together very neatly.

If you write your own programs, Power is excellent, especially if you write for profit rather than fun. I only wish I could have bought it a year ago when first completed. Recommended.-JS

Since Bob Mergy is not going to produce Adopt-A-Rom, I've bought INSTANT ROM from GREENWICH INSTRUMENTS. Excellent ! Recommended. It's 2k or 4k of CMOS RAM with built-in Lithium battery, which should last 10 years. ROM size, except 0.9"thick. Operating System changes relatively simple.-Geoff Capell

[Midnite requests user's reviews of MUPET & The Manager from BMB Compuscience-ES]

GAME REVIEWS

THE DRAGON'S EYE, $25 From Auto. Sim. 32K. You must locate Dragon's Eye within 21 days. Problems are weather, health, & assortment of terrible monsters. GREAT graphics: full screen map of area you are exploring; when you encounter a monster, map switches to animated display of your efforts to defeat it. You fully control your character by using arrows, magic, & many sword manuevers. One of the best uses of graphics I've seen on PET. HIGHLY RECOMMENDED.-JOH
[NOTE: I consider this one of the best PET games. When I show off my PET to others, I let them play this one. Dragon's Eye goes a logical step beyond the other high quality EPYX adventure games.-JO]

ENCRYPT, $15 from FSS. Decode messages that you or the computer make up. I've only played this kind of game in 2 other programs & like this one best. Protected from accidental inputs & easy to learn, like other FSS games.-JO

GALAXY, $15 from FSS. Object is to loot as many planets in a solar system as you can. You &/or 5 others create a galaxy (by specifying number of levels) & move around by number keys only 1 space at a time. With other players, becomes strategy game of planning moves & saving fuel to loot other planets.-JO

NUCLEAR WAR, $15 from FSS. Battle up to 9 other opponents (human or computer) & the world, by building up your factories, ABM missles, & CONs or troops, plus your R&D (to reduce equipment costs). Another nuclear war program uses some board displays, but this text version is better & tougher. Take notes when the computer plays, because this one's hard to beat. Recommended.-JO

STOCK MARKET, $15 from FSS. My favorite market game! From 2 to 10 players (any combo of human vs computer) buy & sell stocks of 5 companies to become the first to be worth 1 million dollars. Well documented with REMarks & written instructions; uses routines to prevent program breakdowns. Drawback: when 2 of you play, goal should be higher. Recommended.-JO

VIGIL, $35 from ABACUS Software. Game language interpreter for 80x50 graphics. For all 40 column Pets. Good for writing short, simple games & for experimenting, but harder to use than BASIC for long programs. Includes commands for plotting points, setting timers, & even using shape tables. Includes 9 sample games, of which some are better than average. It may be worth $35, but could have included more features (such as plotting a LINE BETWEEN TWO POINTS). The idea is here, but programming has its weak points. BASIC is still better for writing most games, while machine language is best for serious programming.-JOH

HARDWARE REVIEWS

CBM 2031, $485 from A.B. Computers. Mine arrived today, only 2 years after announced. Literally half of a 4040 dual disk drive, just as smart, but has only 1K of buffer memory, which limits it to 1 relative file open at a time. Drive to drive BACKUP & COPY commands fail (no second drive to use!). Has only 1 single-color LED light: is "on" when drive is active, & "flashes" after an error. If power-on diagnostic fails, flash code lists the trouble. My particular unit passed its performance test easily, but dislikes my 4040 diskettes. It loves to say, "DISK ID MISMATCH", as though it were an old DOS 1 unit. The same cure works: INITIALIZE as often as necessary until the diskette is accepted. I revised Chris Bennet's MAIL LIST for this drive, but had to put INITIALIZE commands throughout to make it work reliably. Maybe the 2031's Tandon Magnetic drive cannot easily read my 4040's Shugart drive formatting.

An excellent product for those with a 4040 drive who need a second work station, or for those starting cheaply. However, plan on trading up, since most users really do need dual drives. If you want one, order right away; mine is numbered almost 5,000 after a couple of weeks in production. Could be hard to get, once schools find out they exist. Recommended.-JS

RANDOM FILES NOTE: The 2031 includes a demo program called RANDOMEXAMPLE. A working copy of RANDOM 1.00, which has been on 2040 & 4040 demo disks for years. RANDOM 1.00 has NEVER WORKED with DOS 2, but continues to appear on 4040 demo disks. Use RANDOMEXAMPLE instead, if you must use RANDOM files. Better yet are true relative files; I have yet to see a CBM demo program for those. The best public domain example, as far as I know, is Chris Bennett's latest version of Mail List 4040 & Mail List 8050, available from the Toronto PUG, our ATUG, & other user groups.-JS

CBM 4010, $400 from Commodore. Speech synthesizer. Sits nicely, & looks good atop an 8032. Probably works with all models. Made by same company as TYPE-N-TALK below, sounds as good, but vastly harder to use. Works from User port, but has an IEEE connector at synthesizer end, so requires a $50 P-I cable. Dead as a doornail until large BASIC program is loaded & run. Program needs lots of input to say much, & cannot save its input for reuse. NOT recommended!-JS

TYPE-N-TALK, $275 from Votrax. Speech synthesizer. Requires RS232 input (RS232 printer interfaces from PET run about $120), & standard hi-fi speaker. This little box is amazing! Substitute it for an RS232 printer to "say" anything you would normally send to the printer! Like others of its breed, sounds very mechanical at times, although it says "United States of America" perfectly. Requires NO software; can even be operated in immediate mode (i.e., open4,4:print#4,"united states of america"). Being RS232, it works equally well on most other brands of computer. Highly recommended if you need voice synthesis.-JS

EPSON MX-80 F/T, $645 from A.B. Computers. Friction plus tractor-feed version of the popular MX-80 printer. Takes tractor feed paper or remove the tractor to use rolls or single sheets. An 8161 IEEE ($45) interface works with the PET, if PET programs in use send true ASCII for lower case. Wordpro, the new Pascal, Viscalc, & MAE (with patches supplied by EHS) can send true ASCII. BASIC can send upper case & numbers. Versions of Basic-aid (public domain) have been developed to screen dump to an ASCII printer in lower & upper case. An MX-80 newsletter & user group has been formed [See under MAGAZINE REVIEWS]. No PET graphics (it is rumored that someone is working on a ROM for them), but it is a cheaper & better printer than the CBM 4022.-Arthur Cochrane

TALLY 8024 PRINTER, $1,700 from Mannesmann Tally. Super fast, heavy, quiet 7X9

dot matrix printer. Definitely top-of-the-line for PET, unless you need letter-quality. (In that case, use the new "L" option, offering multi-pass correspondence-quality printing.) A good 20 db. quieter than the CBM 4022, & at least 4 times as fast. Takes up to 15 inch paper. Keep input paper away from output, or it will tend to refeed & jam. Hard to change paper easily (threaded past the dual tractors & platen). Handles CBM formatting codes & displays cursor control characters, but not other PET graphics. Can also act as a regular ASCII printer. On arrival from another user, an IC was laying out loose & a pin broken; Tally, known for their service, talked me through a wire-wrap fix over a toll-free phone line immediately. Recommended.-JS

INTEGREX CX80 COLOR MATRIX PRINTER, $2,000 from Integrex, Inc. We forgot to tell you about the color PET printer we saw at NCC in Issue #4 so... It does exist & is essentially a CBM 2022 printer, (though the company would never describe it that way), with the addition of a 3 position ribbon lifter, with a special tri-color ribbon. Color prints are VERY slow, as each line is passed in all three colors. Color commands from PET are fairly detailed in order to get anything very fancy. If you REALLY need a color printer, no one in Microdom has one available except us Commodore owners! -JS

PTX40 PET COLOR ADD-ON UNIT, $399 from Integrex, Inc. The company sent this to NCC, but it broke in shipment, so we didn't get to see it perform.-JS

SPACEMAKER II, $39 from Microtech. Improved version of the old Spacemaker. Has 4 sockets instead of 2, selected with a slide switch. Allows use of EPROMs (couldn't be used on older Spacemaker) & ROMs with jumpers to accept Intel 2732 EPROM. Plugs into PET same as old Spacemaker. Software selection of chips is an extra-cost option. A good design at a good price for chips that want the same socket (Viscalc, Jinsam, Command-O, Calc). If you don't do ROM software development, it is cheaper than Soft ROM & eliminates need for loading.-Arthur Cochrane

VISIBLE MUSIC MONITOR, $60 from DES. Hardware: digital-analog 4-voice converter, with CB2 sound enabled & extended User/2nd cassette ports. Software: excellent 8K machine-language program for music entry & playing. 11 octave range, displays treble & bass clefs, user definable note-keys for keyboard entry, & full range of scales, notes, sharps, flats, & tempos. Manual: well done with tutorial example. User comments: very impressive, good sound capability, relatively easy to use, is both disk & tape oriented. User criticism: lacks capability to play notes while in edit/entry mode, though partial sections can be played in play mode. Music saved is currently saved with a copy of monitor, & autoplay feature will only work with tape saved music. [Software & music tapes will work with old PETUNIA board; CB2 sound is not produced & no extended ports. I simply re-soldered my CB2 wires to PETUNIA board. Software-only price unknown.]-Roy Wagner

3M CRT SCREEN, $15. Glare reducer for terminals with 12" screens. A highly effective glare-blocking plastic screen, if glare comes from above or below the screen. Shinier than no screen at all if the glare is from in front of the terminal (i.e., off your white shirt). Protects against prying fingers when used with kids, as well as flying glass if you manage to break the CRT. Unfortunately, I sit tall enough that I cannot read the bottom screen line unless I slouch. When cut down to fit 9" screens, it blocks the whole screen from my view! Could be solved by inserting a washers in front of the screen to tilt it upward, but would also increase glare from above. Normally does not reduce clarity of text, but late at night, screen characters seem to shimmer & dance. A fine product, for short people.-JS

RADIO SHACK Glare reducer, $10. Fine mesh netting to fasten over a 12" CRT

screen. Can apparently be cut down for 9" screens, but that idea was not tested. Appears to work like silk finish photographs, by reducing visual acuity. I need sharp focus more than I need to avoid glare, so I wouldn't use it. -JS

NOTE on screen brightness: In M#3, we complained that the 8032 screen is not bright enough in a sunlit office. We were wrong: we received some badly adjusted CRTs. (Has anyone seen a PET delivered with a correctly adjusted CRT?) Inside the CRT hood, there is a second brightness control that needed a simple twist. Users, of course, are not to remove this hood, because of very high voltage inside. Owners of Fat Forty's, who use Text Mode, may want to have a similar adjustment made to a little internal "pot" called "height", so that ?chr$(14) won't pop the cursor out of sight. If your screen either seems tilted or fuzzy, see your dealer. I sent a PET back to Commodore California twice under warrantee 3 years ago, & asked to have a bad tilt fixed both times, but they never touched it. Repairing it myself took all of 45 seconds, once I saw a service manual!-JS

METAL DESK, $295? from Interlink, Inc. Nice metal desk designed for CBM computers. Has (optional) cutout at left (or right) end of the Formica-type top, to hold an 8032 perfectly, IF THE TOP SCREWS ARE FASTENED DOWN! If you've unfastened the bonnet to install a ROM or whatever, the desk is unusable until the bonnet is refastened. Other options: shelf suitable for a CBM disk, with holes for fan & cables, & multiple outlet extension cord. Matching printer stand also available for $100, but unlike most others, lacks a rack to catch printouts. Knocks down easily for transport.-JS

FORMICA DESK, $395 from ECX. A typical-looking 60"x28" imitation walnut or oak desk, with several nice features. Has 22" well in middle suitable for any model PET, deep shelf on one side for most disk drives (but no back access to plug them in!) & 1 deep drawer on the other side. One side of desk top is ample for CBM 4022 printer, but not large enough for the TALLY 8024 or daisy wheel printers. Very close to what is really needed, but still not the one I will buy.-JS

UPDATE on 8050 disk: The 8050 now comes with Tandon Magnetic drives instead of Micropolis ones, but the beast is still tempermental! If you buy an 8050, be SURE to buy it from a dealer who will replace it AS OFTEN AS NECESSARY to get you one that works. The acid test is BACKUP (the hardest command for the disk to carry out). Of 20 or more 8050s I've seen, only 1 could back up a diskette reliably in both directions, & I no longer have it. Some of the problem is allignment, so ask your dealer to adjust that before demanding another drive. The 4040 disks I've seen all work reliably, but they don't try to do as much. If you already have a weak-kneed 8050, help is on the way in the form of another set of ROMs for your disk.-JS

[ED. NOTE: We planned to review the PEdisk 2 this issue. Both JO & JOH have bought them now, & are quite pleased with them--so pleased, that we haven't been able to tear them away long enough to write down their thoughts yet. Call JO at CIPUG's address for more info.]

HOME APPLICATIONS REVIEWS

DINNER'S ON, $15, by Briley Software. Gives you up to 25 days of prerecorded, randomly-selected meals. You enter all ingredients & meal information as DATA statements within the program. Good description in manual. You really need a printer to use this program; otherwise, you have to hand-copy the computer lists, which defeats the purpose of the program.-JO

GROCERY MART, $15 from Briley Software. You use DATA statements within the program, as in above program. Very good manual explains everything. Again, you

need a printer to use the program effectively. Advantage: since you use the data in both programs, you don't have to build data files. Loads quickly to both tape or disk. I doubt if non-PET users (like my wife) would go to the trouble of writing data into these programs. Debbie would rather shop the old way.-JO

UTILITIES REVIEWS

FILEMASTER UPDATE. Len Sasso (of Software by Sasso & Cimmarron) has released a new version of his filemaster program with a much faster disk access routine & some more features. For ease in performing program copying, scratching, & recovery of programs files, this package is unsurpassed.-Joe Spatafora

PASCAL for 4032, $295 from Commodore. Uses a dummy ROM at $9000 or $A000. Improved over Upgrade BASIC 2.0 version in that, on startup, a printer setup menu is executed. Rest of the functions are the same & BASIC 4.0 disk commands can be executed in direct mode.-Arthur Cochrane

[For those of you wanting a GOOD BASIC COMPILER, see the article "Compiling for Speed" in Printout, with its favorable review of Drive Technology Limited 's compiler, which is being marketed by Dataview Ltd. in the U.K. Rumored to be marketted in the U.S. soon.-ES]

ATUG NOTES
by Brent Anderson

He's still organizing, I'm told. One new disk each from Germany and England have been received since M#4. More news next time.-ES

VIC NOTES
by John O'Hare

As of Mid-October, 15,000 VIC's have been sold in Japan, 15,000 more in the U.S., &, though not yet available in Europe, orders are accumulating fast.-JS

If you really want a color PET, Commodore suggests you consider buying a VIC as a peripheral for your PET! Seriously, it uses Upgrade BASIC V2, is cassette-compatible, & has excellent color compared to Apple, & Atari.-JS

Some VIC POKE locations are:

51	decrements when key hit.	204	cursor on flag.
56	pointer to top of memory.	211	cursor column.
67	holds 1 when key hit.	214	cursor row.
197	value of key depressed.	36865	border position (vertical).
145	flag for left shift key.	36864	border position (horizontal).
245	detects special keys.	36869	pointer to character generator. 240=norm. 255=7168.

To read a joystick on a VIC (standard ATARI joystick works), use the following subroutine:

```
9000 POKE 37154,127
9010 JO=(NOT((PEEK(37152)AND128)/8+( PEEK(37151)AND60)/4))+32
9020 POKE 37154,255
9030 RETURN
```

JO Values returned are: 1=up, 17=up&rt, 16=right, 18=down&r t,
2=down, 6=down&lft, 4=left, 5=up&lft,

VIC GAME REVIEWS

VIC GAMES PAC, $25 from Creative Software. 3 VIC arcade games: VIC Trap, Seawolf, & Bounce Out. Seawolf & Bounce Out are machine language, with very fast action. Very good games, but could be better if they used Hi-Res graphics.-JOH

RESOURCES

ABACUS SOFTWARE	P.O. Box 7211, Grand Rapids MI 49510
AUTOMATED SIMULATIONS	1988 Leghorn, Mountain View CA 94022
BRILEY SOFTWARE	P.O. Box 2913, Livermore CA 94550
CASCADE COMPUTERWARE	P.O. Box 235a?, Everett WA 98203
THE CODE WORKS	P.O. Box 550, Goleta CA 93116
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CREATIVE SOFTWARE	P.O. Box 789-M, Morristown NJ 07960
DATA TRANSFER ASSOCIATES	5102 Pommeroy Dr., Fairfax VA 22032
DISKS,ETC.	P.O. Box 327, Center Valley PA 18034
DR. DALEY SOFTWARE	Water St., Darby MT 59829
EASTERN HOUSE SOFTWARE	3239 Linda Dr., Winston-Salem NC 27106
ECX	2678 N. Main St., Suite 6, Walnut Creek CA 94596
EPSON USERS GROUP	1017 Trollingwood Ln., Raleigh NC 27609
FSS SOFTWARE	P.O. Box 8403, Austin TX 78712
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LEADING EDGE COMPUTER PRODUCTS	4471 Santa Monica Blvd., Los Angeles CA 90029
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